

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

c) Amendments to the Claims

Please cancel claims 2 and 20-23 without prejudice or disclaimer. Kindly amend claims 1, 4 and 12 and add new claim 25 as follows. A detailed listing of the status of the claims that are or were in the application is provided.

--1. (Currently Amended) A method of manufacturing a material comprising the steps of:

(A) (a) contacting a solution containing a solvent, a partially hydrolyzed silicon compound ~~silicon~~, and surfactant with a substrate having alignment control ability to the surfactant; and

(B) (b) drying said substrate to remove the solvent contained in said solution ~~for forming to form~~ a material having uniaxially aligned channel structures, wherein the channel structures comprise the surfactant and wherein the channel structures are substantially parallel to the substrate surface.

2. (Cancelled)

3. (Cancelled)

4. (Currently Amended) A method of manufacturing a material, comprising the steps of:

(a) coating a substrate having alignment control ability to a surfactant with a solution containing a partially hydrolyzed silicon alkoxide and the surfactant; and

(b) drying said coated substrate to form a material having uniaxially aligned channel structures, wherein the channel structures comprise the surfactant and wherein the channel structures are substantially parallel to the substrate surface.

5. (Previously Presented) A method according to claim 4, wherein the step of coating the substrate is a step of selectively coating a desired portion of said substrate with said solution in a desired pattern and, after the drying step, a patterned mesostructured silica is formed.

6. (Previously Presented) A method according to claim 4 or 5, wherein said substrate is a silicon single crystal substrate having (110) orientation.

7. (Original) A method according to claim 4 or 5, wherein said substrate is a substrate whose surface is coated with a polymer compound film subjected to a rubbing process.

8. (Original) A method according to claim 4 or 5, wherein said substrate is a substrate whose surface is coated with a Langmuir-Blodgett film of polymer compound.

9. (Previously Presented) A method according to any one of claims 4 or 5, wherein the substrate is coated with the surfactant solution by a pen lithography method.

10. (Previously Presented) A method according to any one of claims 4 or 5, wherein the substrate is coated with the surfactant solution by an ink jet method.

11. (Previously Presented) A method according to any one of claims 4 or 5, wherein the substrate is coated with the surfactant solution by a dip coating method.

12. (Currently Amended) A method of manufacturing a material, comprising the steps of:

(a) coating a substrate having alignment control ability to a surfactant with a solution containing a partially hydrolyzed silicon alkoxide and the surfactant;

(b) drying said coated substrate to form a material having uniaxially aligned channel structures, wherein the channel structures comprise the surfactant and wherein the channel structures are substantially parallel to the substrate surface and, thereafter,

(c) removing the surfactant.

13. (Previously Presented) A method according to claim 12, wherein said step of coating said substrate with said solution is a step of selectively coating a desired portion of said substrate with said solution in a desired pattern.

14. (Previously Presented) A method according to claim 12 or 13, wherein said substrate is a silicon single crystal substrate having (110) orientation.

15. (Original) A method according to claim 12 or 13, wherein said substrate is a substrate whose surface is coated with a polymer compound film subjected to a rubbing process.

16. (Original) A method according to any one of claims 12 or 13, wherein said substrate is a substrate whose surface is coated with a Langmuir-Blodgett film of polymer compound.

17. (Previously Presented) A method according to any one of claims 12 or 13, wherein said substrate is coated with said surfactant solution by a pen lithography method.

18. (Previously Presented) A method according to any one of claims 12 or 13, wherein said substrate is coated with said surfactant solution by an ink jet method.

19. (Previously Presented) A method according to any one of claims 12 or 13, wherein said substrate is coated with said surfactant solution by a dip coating method.

20. -23 (Cancelled).

24. (Previously Presented) A method according to Claim 1, further comprising the step of removing said surfactant.--

--25. (New) A method of manufacturing a material comprising the steps of:

(a) contacting a solution containing solvent, silicon and surfactant with a substrate having alignment control ability to the surfactant; and

(b) drying said substrate to remove the solvent contained in said solution to form a material having uniaxially aligned channel structures which are substantially parallel to the substrate surface,

wherein a surface of the substrate has a hydrophobic region and a hydrophilic region.